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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,230	12/04/2003	Masayuki Ushiku	03723/HG	9225

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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT PAPER NUMBER

1774

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/729,230

Applicant(s)

USHIKU, MASAYUKI

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-8 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Newly submitted claims 6-8 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5, drawn to an ink jet recording sheet, classified in class 428, subclass 32.1.
- II. Claims 6-8, drawn to a method of making an ink jet recording sheet, classified in class 427, subclass 152.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group II and Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as by casting a mixture of particles and binder onto a casting surface, then contacting the coating formed by this method with a support while still wet, drying the coating and peeling the medium from the casting surface.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for

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prosecution on the merits. Accordingly, claims 6-8 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. (US 2002/0130943). Katoh et al. disclose an ink jet recording medium comprising a non-water absorptive support and an ink absorbent layer including polyvinyl alcohol, a cationic polymer, and other materials, and having a surface pH of 4 to 6 [0021-0022]. The layer may contain silica which has a primary particle size of 3 to 30 nm [0096-0100, 0104]. While the reference states that gas phase silica and colloidal silica are more preferred, the generic teaching of synthetic non-crystalline silica clearly encompasses the other conventionally used wet phase silicas, i.e. precipitated silica and gelled silica. The reference discloses that the particles may form secondary coagulated particles, but does not state the particle size for such coagulated particles. However, the reference does indicate that in order to maintain glossiness, particles sizes should be controlled. Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to determine the secondary particle size of the silica in order to maintain high levels of glossiness for the medium. The reference also sets forth proportions of particles to binder which overlap with the range of claim 1 [0106].

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida et al. (6,773,771) for reasons of record with respect to this reference and for reasons given below. The reference discloses an ink jet recording sheet comprising a support and at least one ink-receptive layer containing silica fine particles (see the abstract). The silica has a primary particle size of 20 nm or less. The reference

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discloses both wet and dry process silica (see col. 3, lines 22-40). These include silica gel whereby primary particles of silica gel from several to 10 microns in size are agglomerated into secondary particles. While the reference prefers fumed silica, the disclosure broadly encompasses wet process silica as well. With respect to the preferred embodiment, the reference also discloses that secondary particles should be limited to 50 to 500 nm in size so that gloss is not lowered (see col. 4, lines 9-16). It would have been obvious to one of ordinary skill in the art to use the secondary particle size disclosed for the preferred fumed silica as the secondary particles size for other embodiments because the particle size is disclosed as necessary for gloss of the medium.

4. Applicant's arguments filed 6/8/05 have been fully considered but they are not persuasive with respect to the modified grounds of rejection. The disclosures of both references are broad enough to encompass the three conventional types of wet process silica. The disclosure of Katoh et al. includes synthetic non-crystalline silica. Such silica may be formed by a wet process. Since colloidal silica is the preferred wet process, it is clear that the other processes are also envisioned while not the preferred embodiment. Also, the formation of secondary particles is specifically disclosed at [0097].

With respect to the declaration submitted by applicants, while reasons were given for the selection of examples, there are several examples that met applicants criteria were passed over for other examples. Therefore, it is unclear how the specific selections were made. In addition, in order to properly analyze the data submitted, the

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examiner needs more information. For example, what type of support did applicants use in their examples (see p. 35 of the specification)? Of course if paper was used by applicants and a non-absorbent support used to represent the prior art, the ink absorption of the media would be expected to differ greatly based upon the absorbency of the supports. It is unclear what the examples show if a comparison cannot be made between each element of the media. The examiner needs to know the materials of each layer, the support characteristics, and the inks used to image the media in the tests. In addition, the examiner needs to know what parts of the reference were followed, were there any variations that had to be made and why. In other words, from the declaration, the examiner cannot tell how the prior art was interpreted by applicants and cannot identify all aspects of applicants invention either. More information is needed for proper comparison.

With respect to Ashida et al., the disclosure is not limited to the examples. Since fumed silica is preferred, Ashida et al. clearly discloses that the less preferred silicas are those of the three conventional wet processes.

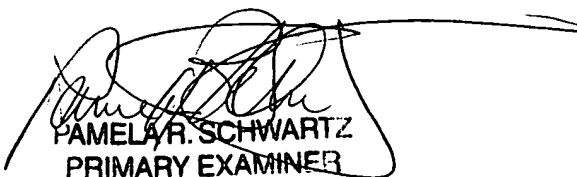
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pamela R. Schwartz  
August 18, 2005



PAMELA R. SCHWARTZ  
PRIMARY EXAMINER